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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT PAPER NUMBER

2665

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,741

Applicant(s)

JAGADEESAN ET AL.

Examiner

Phuongchau Ba Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8-3-5 Election.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) 3-13, 25-59 and 71-82 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 14-24 and 60-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 2, 16-17, 19-20, 24, 61-63, 65-66, 70 are objected to because of the following informalities: ":" should be deleted, i.e., claim 2 (line 1). It is notice that the ":" is for listing a list of items or steps. Appropriate correction is required.

Claim Rejections – 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors

Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology

Technical Amendments Act of 2002 do not apply when the reference is a U.S.

patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Westerlund (6,757,654).

Regarding claim 1,

Westerlund (6,757,654) discloses a device (700-fig.7) comprising:

a main encoder (primary encoder 708-fig.7) for encoding a first portion of a data stream into first frames and a second portion of the data stream into second frames, the second portion following the first portion; and

a redundant encoder (redundant encoder 710-fig.7) for encoding the first portion into first redundant frames that are delayed from the first frames according to a redundant-coding delay having a first value and the second portion into second redundant frames that are delayed from the second frames according to a redundant-coding delay having a second value different from the first value.

Claim Rejections – 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2–22, 24, 60–68 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westerlund (6,757,654) as applied to claim 1 above, and further in view of Niu (US 2002/0069388 A1).

Regarding claim 2, Westerlund discloses all the claimed limitations, except an adjustable delay for imparting the redundant–coding delay into the first and second redundant frames, the adjustable delay for controlling a value of the redundant–coding delay responsive to a control signal.

However, in the same field of endeavor, Niu (US 2002/0069388 A1) discloses an adjustable delay (a delay, page 2, 0022 & 0036) for imparting the

redundant-coding delay into the first and second redundant frames, the adjustable delay for controlling a value of the redundant-coding delay responsive to a control signal (page 2, 0022 & 0036). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency for lost packets.

Regarding claims 14 & 60,

Westerlund discloses a device comprising:

means for encoding (708-fig.7) a first portion of a data stream into first frames;

means for redundantly encoding (710-fig.7) the first portion into first redundant frames that are delayed from the first packets according to the present value;

means for encoding (708-fig.7) a second portion of the data stream into second frames, the second portion following the first portion; and

means for redundantly encoding (710-fig.7) the second portion into second redundant frames that are delayed from the second frames according to the updated value.

Westerlund discloses all the claimed limitations, except means for inputting a present value for a redundant-coding delay; means for determining an updated value for the redundant-coding delay that is different from the present value.

However, in the same field of endeavor, Niu discloses means for inputting a present value for a redundant-coding delay (page 2, 0022 & 0036); means for determining an updated value for the redundant-coding delay that is different from the present value (page 4, 0052; also page 3, 0038-0039). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 15 & 61, Westerlund discloses all the claimed limitations, except means for setting a minimum threshold for the redundant-coding delay,

and wherein the updated value for the redundant-coding delay is maintained not below the minimum.

However, in the same field of endeavor, Niu discloses means for setting a minimum threshold for the redundant-coding delay (the minimum is the burst channel fading period length—emphasis added), and wherein the updated value for the redundant-coding delay is maintained not below the minimum (page 3, 0038–0039; page 4, 0052). Therefore, it would have been obvious to an artisan to apply Niu’s teaching to Westerlund’s system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 16 & 62, Westerlund discloses all the claimed limitations, except means for setting a maximum threshold for the redundant-coding delay (the maximum is the Not Too Long delay that is longer than the burst channel fading period length –emphasis added), and wherein the updated value for the redundant-coding delay is maintained not above the maximum.

However, in the same field of endeavor, Niu discloses means for setting a maximum threshold for the redundant-coding delay, and wherein the updated

value for the redundant-coding delay is maintained not above the maximum (page 3, 0039; page 4, 0052). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 17 & 63, Westerlund discloses all the claimed limitations, except means for receiving a feedback signal through a network, wherein the updated value is determined also from the feedback signal.

However, in the same field of endeavor, Niu discloses means for receiving a feedback signal (NACK) through a network, wherein the updated value is determined also from the feedback signal (page 3, 0037; page 4, 0051-0052). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 18 & 64, Westerlund discloses all the claimed limitations, except means for receiving a return stream of packets through a network; and means for determining a return redundant coding delay of the return stream, wherein the updated value is determined also from the return redundant coding delay.

However, in the same field of endeavor, Niu discloses means for receiving a return stream of packets through a network (page 2, 0022 & 0036); and means for determining a return redundant coding delay of the return stream, wherein the updated value is determined also from the return redundant coding delay (page 3, 0037-0039; page 4, 0051-0052). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 19 & 65, Westerlund discloses all the claimed limitations, except means for determining at least one performance parameter of the

network after encoding the first portion, wherein the updated value is determined also from the performance parameter.

However, in the same field of endeavor, Niu discloses means for determining at least one performance parameter of the network after encoding the first portion (page 4, 0051–0052), wherein the updated value is determined also from the performance parameter (page 4, 0052). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 20 & 66, Westerlund discloses all the claimed limitations, except means for determining an ideal value of a redundant encoding delay from the performance parameter.

However, in the same field of endeavor, Niu discloses means for determining an ideal value of a redundant encoding delay from the performance parameter (page 4, 0052; page 3, 0038–0039). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's

system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 21 & 67, Westerlund discloses all the claimed limitations, except means for determining an episode length number of one of an episode of consecutively lost packets and an episode of consecutively received packets.

However, in the same field of endeavor, Niu discloses means for determining an episode length number of one of an episode of consecutively lost packets and an episode of consecutively received packets (page 4, 0051–0052 & 0056–0058). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 22 & 68, Westerlund discloses all the claimed limitations, except means for determining at least one of an average and a variance of the counted episode length number.

However, in the same field of endeavor, Niu discloses means for determining at least one of an average and a variance of the counted episode length number (page 3, 0038–0039; page 4, 0051–0052). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

Regarding claims 24 & 70, Westerlund discloses all the claimed limitations, except means for determining a time difference between consecutive episodes.

However, in the same field of endeavor, Niu discloses means for determining a time difference between consecutive episodes (page 3, 0038–0039; page 4, 0051–0052). Therefore, it would have been obvious to an artisan to apply Niu's teaching to Westerlund's system with the motivation being to increase retransmission efficiency and decrease the number of retransmission.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westerlund (6,757,654) in view of Niu (US 2002/0069388 A1) as applied to claim 21 above, and further in view of Schuster (5,870,412).

Regarding claims 23 & 69, Westerlund discloses all the claimed limitations, except wherein the episode length number is determined for an episode within a moving time window.

However, in the same field of endeavor, Schuster (5,870,412) discloses wherein the episode length number is determined for an episode within a moving time Window (col.6, line 49–col.7, line 38). Therefore, it would have been obvious to an artisan to apply Schuster's teaching to Westerlund's system with the motivation being to enable correction from the loss of multiple packets in a row, without significantly increasing the data rate or otherwise delaying transmission.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose


telephone number is 571-272-3148. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DUCHO
PRIMARY EXAMINER


10-17-05


Phuongchau Ba Nguyen
Examiner
Art Unit 2665